NM107

Cat. No.:	HY-10468		
CAS No.:	20724-73-6		
Molecular Formula:	C ₁₀ H ₁₅ N ₃ O ₅		
Molecular Weight:	257.24		
Target:	HCV		
Pathway:	Anti-infection		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year

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SOLVENT & SOLUBILITY

In Vitro DMSO : 100 mg/mL H ₂ O : ≥ 50 mg/mL (* "≥" means soluble Preparing Stock Solutions	DMSO : 100 mg/mL (388.74 mM; Need ultrasonic) H ₂ O : ≥ 50 mg/mL (194.37 mM) * "≥" means soluble, but saturation unknown.						
	Preparing Stock Solutions	Solvent Mass Concentration	1 mg	5 mg	10 mg		
		1 mM	3.8874 mL	19.4371 mL	38.8742 mL		
		5 mM	0.7775 mL	3.8874 mL	7.7748 mL		
		10 mM	0.3887 mL	1.9437 mL	3.8874 mL		
	Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: PBS Solubility: 50 mg/mL (194.37 mM); Clear solution; Need ultrasonic						
	2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (9.72 mM); Clear solution						
	3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (9.72 mM); Clear solution						
	4. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (9.72 mM); Clear solution						

BIOLOGICAL ACTIVITY

Description

NM107 (2'-C-Methylcytidine) is an nucleoside inhibitor of the hepatitis C virus (HCV) NS5B polymerase, the EC_{50} of NM107 in the wild-type replicon cells is 1.85 μ M^{[1][2]}.

HO

 NH_2

OH

IC ₅₀ & Target	HCV ^[1]			
In Vitro	NM107 (25 μM; 24 hours; Huh7-1 cells and cell culture-propagated HCV) treatment decreases extracellular viral titers and intracellular RNA levels. MCE has not independently confirmed the accuracy of these methods. They are for reference only. RT-PCR ^[2]			
	Cell Line:	Huh7-1 cells and cell culture-propagated HCV (HCVcc)		
	Concentration:	25 μΜ		
	Incubation Time:	24 hours		
	Result:	Extracellular virus titers declined in parallel with intracellular RNA levels.		

REFERENCES

[1]. Mathy JE, et al, Combinations of cyclophilin inhibitor NIM811 with hepatitis C Virus NS3-4A Protease or NS5B polymerase inhibitors enhance antiviral activity and suppress the emergence of resistance. Antimicrob Agents Chemother. 2008 Sep;52(9):3267-75.

[2]. Guedj J, et al. Modeling shows that the NS5A inhibitor daclatasvir has two modes of action and yields a shorter estimate of the hepatitis C virus half-life. Proc Natl Acad Sci U S A. 2013 Mar 5;110(10):3991-6.

Caution: Product has not been fully validated for medical applications. For research use only.

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